



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,579	02/13/2002	Edmund Schuller	S&S-1108	6967

7590 05/27/2004

STEPHEN E. BONDURA, ESQ.  
DORITY & MANNING, P.A.  
P.O. BOX 1449  
GREENVILLE, SC 29602-1449

EXAMINER
----------

THOMPSON, KENNETH L

ART UNIT	PAPER NUMBER
----------	--------------

3672

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/074,579

Applicant(s)

SCHULLER ET AL.

Examiner

Kenn Thompson

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 29-37 and 39-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-48, 55 and 56 is/are allowed.
- 6) ☒ Claim(s) 29-37, 39-43 and 49-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 3672

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the free end portion at an axial bearing end of the shaft that is opposite from the open-end rotor end of the shaft must be shown or the features canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The substitute specification filed 16 September 2002 has been entered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 29-37, 39-43 and 49-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Paweletz et al., U.S. 5,555,715.

Regarding claim 29, Paweletz et al. discloses in figures 1-6 an open-end spin rotor for an open-end spinning textile machine. Paweletz et al. discloses a shaft (1) having a free end

Art Unit: 3672

portion (12) at an axial bearing end of the shaft that is opposite from an open-end rotor end (13) of the shaft. Paweletz et al. discloses a longitudinally extending projection (4) and a first alignment surface (5) defined at an annular end face of the projection in a plane generally transverse to a longitudinal axis of the shaft. Paweletz et al. discloses a support cap (2) fitted onto the projection. Paweletz et al. discloses the support cap having an end defining an axial bearing surface (2') of the spin rotor and a first counter alignment surface (15) disposed against the first alignment surface (5) of the shaft free end portion. Paweletz et al. discloses by engagement of the first alignment surfaces (5) and first counter alignment surfaces (15) the axial bearing surface (2') is disposed in a defined plane generally transverse to a rotational axis of the shaft.

As to claims 30 and 51, Paweletz et al. discloses a second alignment surfaces (one of the two 5) defined on the shaft free end portion and a second counter alignment surface (one of the two 15) on the support cap disposed against the second alignment surface.

As to claims 31 and 35, Paweletz et al. discloses in figure 1 one of the first and second pairs of alignment and counter alignment surfaces (5,15) are inclined at complementary angles other than perpendicular to the rotational axis of the shaft.

As to claims 32 and 37, Paweletz et al. discloses the support cap is coaxial to the shaft.

As to claims 33 and 34, Paweletz et al. discloses the first and second alignment and counter alignment surfaces (5,15) are disposed in a plane generally perpendicular to the rotational axis of the shaft.

As to claim 36, Paweletz et al. discloses in figure 1 the complementary angles are about 45 degrees with respect to the vertical claim.

Art Unit: 3672

As to claim 39, Paweletz et al. discloses the support cap (2) having a recess (fig 6, open top end 64) defined in an end annular face and the first counter alignment surface (15) being on a bottom surface of the recess.

As to claims 40 and 50, Paweletz et al. discloses the support cap is formed of a ceramic material (col. 2, lines 30-33; a non-metallic material).

As to claim 41, Paweletz et al. discloses the support cap is attached onto the projection with an adhesive material (col. 6, lines 39-45).

As to claim 42, Paweletz et al. discloses the transverse angle of the axial bearing surface (2') is perpendicular to the rotational axis of the shaft.

As to claim 43, Paweletz et al. discloses the axial bearing surface (64') is a crowned surface.

Regarding claim 49, Paweletz et al. discloses the support cap (2) having an axial bearing surface (top portion of 2) at one end and a recess (15) defined in an opposite end into which the shaft projection (4,5) extends. Paweletz et al. discloses the support cap having a counter alignment surface (2') disposed to contact against an annular end face alignment surface (axial end 13) of the shaft (1) free end portion in order to align the support cap (2) such that the axial bearing surface (2') is maintained at a desired angle (180 degrees) with respect to a rotational axis of the shaft.

As to claim 52, Paweletz et al. discloses the counter alignment surfaces (5,15) are disposed in a plane generally perpendicular to the rotational axis of the cap.

Art Unit: 3672

As to claims 53 and 54, Paweletz et al. discloses in figure 6 at least one of the counter alignment surfaces (64') is disposed in a slanted plane other than perpendicular with respect to a rotational axis of the support cap.

### ***Allowable Subject Matter***

Claims 44-48, 55 and 56 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose or suggest all the claimed subject matter including an air escape channel defined between the support cap and the projection, the air escape channel defined longitudinally along an area of the projection covered by the support cap.

The prior art does not disclose or suggest an air escape channel defined in a recess in the support cap, the projection fitted into the recess and the air escape channel defined by an axial bore through a bottom surface of the recess.

### ***Response to Arguments***

Applicant's arguments filed 15 August 2003 have been fully considered but they are not persuasive.

Applicant argues the prior art of Paweletz does not disclose the rotor having a shaft with a free end portion defining an axial bearing surface for the rotor. However the recitation, "said rotor comprising a shaft having a free end portion at an axial bearing end of said shaft that is opposite from an open-end rotor end of said shaft", in claim 29 does not require the free end portion to define an axial bearing surface for the rotor. Paweletz et al. discloses in figure 1 a rotor, being the combination of 1 and 2; having a shaft 1 with a free end portion, being generally

Art Unit: 3672

at the supporting layer 12; at an axial bearing end of the shaft that is opposite from an open-end rotor end of the shaft. Claim 29 does not sufficiently limit the axial bearing end to preclude comparison to the axial edge of the shaft 1 opposite the surface having the drivers.

Applicant's further arguments amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenn Thompson whose telephone number is 703 306-5760. The examiner can normally be reached on 7:00 am - 4:30 pm.

Art Unit: 3672

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J Bagnell can be reached on 703 308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KT

23 April 2004

  
DAVID BAGNELL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600